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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/510,210	11/17/2006	Kazuo Nishikawa	4978-0101PUS1	4408

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EXAMINER
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AFREMOVA, VERA

ART UNIT	PAPER NUMBER
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1657

NOTIFICATION DATE	DELIVERY MODE
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12/07/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/510,210	<b>Applicant(s)</b> NISHIKAWA, KAZUO	
	<b>Examiner</b> Vera Afremova	<b>Art Unit</b> 1657	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 August 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 3,5-8,12 and 14-25 is/are pending in the application.
- 4a) Of the above claim(s) 14-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 3,5-8,12 and 25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

Claims 3, 5-8, 12 and 25 are under examination in the instant office action.

This application contains claim 14-24 drawn to an invention nonelected with traverse in the reply filed on 1/05/2009. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 25, 3, 5-8 and 12 remain rejected under 35 U.S.C. 102(b) as being anticipated by Menzies et al. (“Germicidal ultraviolet irradiation in air conditioning systems: effect on office worker health and wellbeing: a pilot study”. Occup. Environ. Med. 1999, Vol. 56, pages 397-402).

Claims are directed to a method for evaluating elimination of microorganisms wherein the method comprises steps of installing a wind tunnel inside a container, forming a passage of air containing microorganisms inside the wind tunnel, supplying the air containing microorganism in the space inside of the wind tunnel from one side of the wind tunnel, carrying out the sterilizing of the microorganisms to irradiate particles comprising ions to the air containing microorganisms, sampling the microorganisms from the air or particles after irradiation from the other side of the wind tunnel, and measuring the concentration or activity of the sampled microorganisms to evaluate the performance of elimination of the microorganisms

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of said particles from the result of measures. Some claims are further drawn to changing time intervals for irradiation and measurements; to evaluation of dependency of elimination on particles concentration. Some claims are further drawn to microorganisms in a form of mist; to measuring microorganisms by cell culture; to microorganisms being bacteria, mycetes and/or viruses.

Menzies et al. discloses a method for evaluating elimination of microorganisms by germicidal ultraviolet irradiation in air conditioning systems (entire document including abstract). The UV lights are installed inside ventilation air conditioning systems (page 398, col.1, par. 2) and the ventilation air condition system would be a wind tunnel inside a container with a passing through air containing microorganisms within the meaning of the claims. The microorganisms are bacterial and fungal cells and the microorganisms are airborne and, thus, in a form of mist. All variables including microbial cell counts, concentration of dust or dust particles with microorganisms are detected and measured inside rooms, in supply air, in return air (table 3) and, thus, "from the other side of wind tunnel" within the meaning of the claims. The amounts of microorganisms are measured by cell culture (page 398, col. 2, second par, from the bottom). The evaluation is done by using different germicidal lamps and over several time periods over 3 weeks. Thus, the cited method for evaluating elimination of microorganisms comprises same active steps and same structural elements as required by the claimed method including steps of installing a wind tunnel inside a container (providing air conditioner), forming a passage of air containing microorganisms inside the wind tunnel, supplying the air containing microorganism in the space inside of the wind tunnel from one side of the wind tunnel (turning the air conditioner on), carrying out the sterilizing of the microorganisms to irradiate with UV light

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particles comprising ions to the air containing microorganisms (air dust with microbes), sampling the microorganisms from the air or particles after irradiation from the other side of the wind tunnel (collecting air samples in the rooms), and measuring the concentration or activity of the sampled microorganisms to evaluate the performance of elimination of the microorganisms of said particles from the result of measures (measuring cell count by cell culture). Therefore, the cited reference is considered to anticipate the claimed invention.

Claims 25, 3, 5-8 and 12 remain rejected under 35 U.S.C. 102(b) as being anticipated by WO 01/87364 (IDS reference).

Claims as above.

The cited WO 01/87364 teaches a method for evaluating of elimination of microbial cells with ion generating device in air conditioning system, for example: see abstract; example 24 and tables 8 and 9 (see US 2003/0072675 for equivalent translation). The method of WO 01/87364 for evaluating elimination of microorganisms appears to comprise same active steps and same structural elements as required by the claimed method. Therefore, the cited WO 01/87364 is considered to anticipate the claimed invention.

Claims 25, 3, 5-8 and 12 remain rejected under 35 U.S.C. 102(b) as being anticipated by Osawa (IDS reference; Fair Trade Commission. 2001).

Claims as above.

The reference by Osawa recites a method for evaluating of elimination of microbial cells in bacterial and viral mist aerosols after sterilizing treatment with air purifiers, for example: see

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English translation page 3. The Osawa's method for evaluating elimination of microorganisms appears to comprise same active steps and same structural elements as required by the claimed method. Therefore, the cited reference by Osawa is considered to anticipate the claimed invention.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 25, 3, 5-8 and 12 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Menzies et al. ("Germicidal ultraviolet irradiation in air conditioning systems: effect on office worker health and wellbeing: a pilot study". Occup. Environ. Med. 1999, Vol. 56, pages 397-402), WO 01/87364 (IDS reference), Osawa (IDS reference; Fair Trade Commission. 2001).

Claims as above.

The cited reference by Menzies et al., WO 01/87364 and the reference by Osawa are relied upon as explained above for the disclosure of a method for evaluating elimination of microorganisms in air by using a wind tunnel inside a container with means for sterilization and by measuring amounts of microbial cells at the exit of air from the container. All 3 cited references teach evaluation of various means and interval of sterilization in the wind tunnel containers.

In addition, US 6,171,548 (Rose et al) is relied upon to demonstrate a model of a wind tunnel container with means for sterilization of air (figure 7; col. 9-10) that is suitable for

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evaluation of sterilization effects on airborne microorganisms (bioaerosols) with the use of standard and HEPA filters (col.12, lines 1-3).

Thus, the claimed invention as a whole was clearly *prima facie* obvious, especially in the absence of evidence to the contrary, to one having ordinary skill in the art at the time the claimed invention was made.

The claimed subject matter fails to patentably distinguish over the state art as represented by the cited references. Therefore, the claims are properly rejected under 35 USC § 103.

### ***Response to Arguments***

Applicant's arguments filed 8/31/2009 have been fully considered but they are not persuasive.

With regard to the claim rejected under 35 U.S.C. 102(b) as being anticipated by Menzies et al. ("Germicidal ultraviolet irradiation in air conditioning systems: effect on office worker health and wellbeing: a pilot study". Occup. Environ. Med. 1999, Vol. 56, pages 397-402) Applicant argues (response page 3) that the cited method comprises UV light as sterilization means and, thus, it does not employ or suggest sterilization means using ions. This argument does not have persuasive grounds because radiation by ultraviolet is ionizing. Applicant also argues that the sterilizing effect is not evaluated by means of "a wind tunnel inside a container" in the cited method. This is not found particularly persuasive because claimed method does not define any specific arrangement, parameters and/or dimensions of "a wind tunnel inside a container". Thus, the cited method for evaluation of microorganism elimination in the ventilation system inside the building is considered to anticipate the invention as claimed.

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With regard to the claim rejection under 35 U.S.C. 102(b) as being anticipated by WO 01/87364 (same disclosure US2003/0072675) Applicant argues that the sterilizing effect is not evaluated by means of “a wind tunnel inside a container” (response page 4. par. 1) . Yet, the cited WO 01/87364 teaches a method for evaluating of elimination of microbial cells with ion generating device in air conditioning system that inherently encompasses and comprises a flow of air and, thus, “a wind tunnel inside a container” within the meaning of the instant claims.

With regard to the claim rejection under 35 U.S.C. 102(b) as being anticipated by Osawa (IDS reference; Fair Trade Commission. 2001) Applicant argues that Osawa’s evaluation is conducted in a box with volume one cubic meter and using collection of microbes on air filters. Upon review of the reference the Applicant's argument is not found particularly persuasive because the reference describes that the air purifier “emit ions” and, thus the cited method comprise the use of same irradiation as encompassed by the instant claims. With respect to the claimed limitation “a wind tunnel inside a container” it is noted that the claimed method does not define any specific arrangement, parameters and/or dimensions of “a wind tunnel inside a container”. Thus, the cited method for evaluation of microorganism elimination by ionizing irradiation in a room or in a box comprising an air flow is considered to anticipate the invention as claimed.

With regard to the cited US 6,171,548 (Rose et al) Applicant argues (response page 5) that the cited method comprises UV light as sterilization means and, thus, it does not employ or suggest sterilization means using ions. This argument does not have persuasive grounds because radiation by ultraviolet is ionizing. Applicant also argues that the cited reference does not describe “a wind tunnel inside a container” in the cited method. This is not found particularly



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persuasive because the apparatus at fig. 7 contains air inlet 92, air outlet 94 and fan 96 and, therefore, the cited method encompasses “a wind tunnel inside a container” within the meaning of the instant claims.

With regard to claim rejection under 35 USC § 103 applicants argue that there is no suggestion to combine the references. However, the cited references are in the same field of endeavor and they seek to solve the same problems as the instant application and claims, and one of skill in the art is free to select components available in the prior art, *In re Winslow*, 151 USPQ 48 (CCPA, 1966). In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

No claims are allowed.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vera Afremova whose telephone number is (571) 272-0914. The examiner can normally be reached from Monday to Friday from 9.30 am to 6.00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Manjunaht Rao, can be reached at (571) 272-0939. The fax phone number for the TC 1600 where this application or proceeding is assigned is (571) 273-8300. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology center 1600, telephone number is (571) 272-1600.

Vera Afremova

December 2, 2009

/Vera Afremova/

Primary Examiner, Art Unit 1657